

The Southwest Seed Partnership

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southwestseedpartnership.org

The Southwest Seed Partnership

Vision: to improve the supply of native seeds for restoration in New Mexico and Arizona

Arose in October 2015

- ❖ Modeled after the **Willamette Valley Native Plant Materials Partnership** (Corvallis, OR)
- ❖ Funded by:
 - New Mexico Bureau of Land Management
 - USDA Forest Service Southwest Region
 - National Park Service
 - NM Native Plant Society



I. Impetus for Seed Partnership

Conservation Context:

Greater seed needs in the Southwest due to:

- ❖ Wildfire
- ❖ Flash flooding
- ❖ Overgrazing
- ❖ Mining
- ❖ Energy Development



Flash flood in Carlsbad, NM



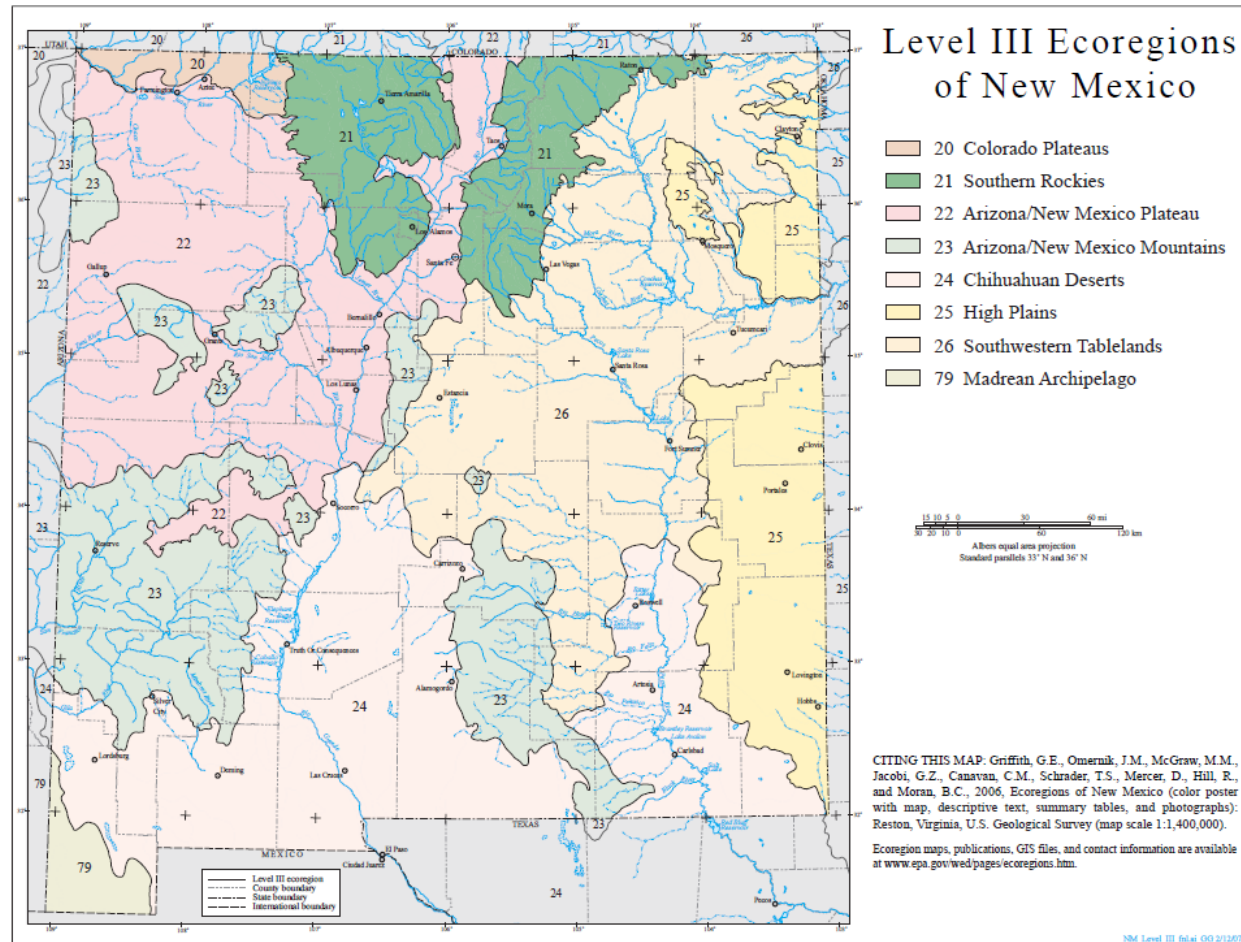
Bare ground & dead trees after the Las Conchas fire at Bandelier National Monument in Jemez Mountains, NM (2011)

Need for Seed

- ❖ Very few large-scale commercial seed suppliers in the Southwest (1 in NM)
- ❖ Often provide cultivars or non-locally sourced seed with low genetic diversity
- ❖ Historic focus on grasses, with limited selections of forbs



I. Impetus for Seed Partnership

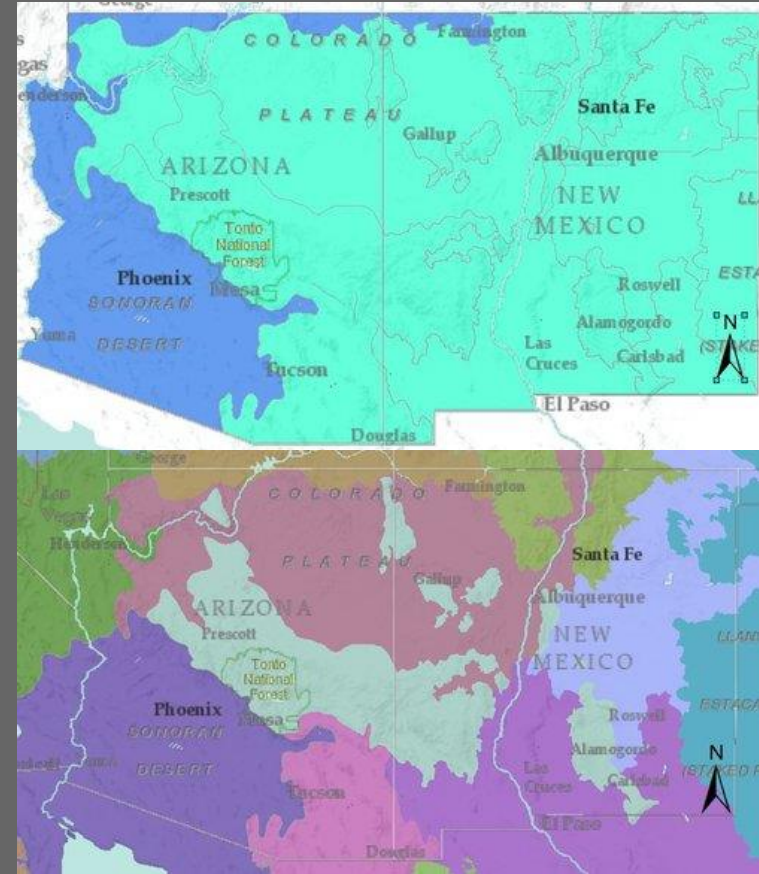


II. Purpose and Strategy of the Seed Partnership

The Southwest Seed Partnership

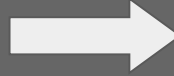
Vision: to improve the supply of native seeds for restoration in New Mexico and Arizona

- ❖ Building resilient native plant communities
- ❖ Enhancing wildlife habitat (improving hunting)
- ❖ Enhancing quicker reclamation
- ❖ Improving rangelands for grazing



II. Purpose and Strategy of the Seed Partnership

National Seed Strategy Goals



SWSP Steps

1. Determine geographic priorities
2. Identify target species (workhorse, early seral, nitrogen fixing, pollinator plants, wildlife and cultural benefits)
3. Collect seed
4. Track seed
5. Determine seed zones (build accessions based on science)
6. Production
7. Collaboration and Coordination!

NATIONAL SEED STRATEGY
for Rehabilitation and Restoration



2016

- Completed **203 seed collections**
- Collected from **five ecoregions**
- Represented by **62 species**
- Established seed cleaning facility in Santa Fe
- Forged partnerships with groups in AZ
- Established data management protocols
- Modified remote data collection software

2017

- Completed **201 seed collections**
- Collected from **five ecoregions**
- Represented by **52 species**
- NM Stakeholder meeting
- Began seed production in AZ
- Constructed seed database
- Expanded seed cleaning capacity
- Built robust accessions for seed production in NM



III. SWSP Progress

Matrix species: make up the structural backbone of plant communities

Matrix Forb Species



Helianthus annuus, *Linum lewisii*, *Verbena encelioides*, *Machaeranthera tanacetifolia*, *Sphaeralcea* sp., *Dalea candida*

Pollinator Species



Asclepias subverticillata, *Cleome serrulata*

Matrix Grass Species



Sporobolus species



Bouteloua species



Pleuraphis species



Bothriochloa species

III. SWSP Progress

Genus	Species	Common Name
Forbs		
<i>Asclepias</i>	<i>speciosa</i>	showy milkweed
<i>Asclepias</i>	<i>subverticillata</i>	horsetail milkweed
<i>Cleome</i>	<i>serrulata</i>	rocky mountain beeplant
<i>Dalea</i>	<i>candida</i>	white prairie clover
<i>Helianthus</i>	<i>annuus</i>	common sunflower
<i>Helianthus</i>	<i>petiolaris</i>	prairie sunflower
<i>Heterotheca</i>	<i>villosa</i>	hairy false golden-aster
<i>Linum</i>	<i>lewisii</i>	prairie flax
<i>Machaeranthera</i>	<i>gracilis</i>	grass-leaf tansy-aster
<i>Machaeranthera</i>	<i>tanacetifolia</i>	Tahoka-daisy
<i>Ratibida</i>	<i>columnifera</i>	red spike Mexican hat
<i>Sphaeralcea</i>	<i>angustifolia</i>	copper globe-mallow
<i>Sphaeralcea</i>	<i>fendleri</i>	Fendler's globemallow
<i>Thelesperma</i>	<i>megapotamicum</i>	Hopi tea greenthread
<i>Thermopsis</i>	<i>montana</i>	mountain goldenbanner
<i>Verbesina</i>	<i>encelioides</i>	golden crownbeard
<i>Xanthisma</i>	<i>spinulosum</i>	lacy tansy-aster



III. SWSP Progress

Genus	Species	Common Name
Graminoids		
<i>Aristida</i>	<i>adscensionis</i>	sixweeks threeawn
<i>Bothriochloa</i>	<i>barbinodis</i>	cane bluestem
<i>Bouteloua</i>	<i>aristidoides</i>	needle grama
<i>Bouteloua</i>	<i>curtipendula</i>	sideoats grama
<i>Bouteloua</i>	<i>eriopoda</i>	black grama
<i>Bouteloua</i>	<i>gracilis</i>	blue grama
<i>Bouteloua</i>	<i>hirsuta</i>	hairy grama
<i>Digitaria</i>	<i>californica</i>	arizona cottontop
<i>Elymus</i>	<i>elymoides</i>	western bottlebrush grass
<i>Hesperostipa</i>	<i>comata</i>	needle-and-thread
<i>Muhlenbergia</i>	<i>porteri</i>	bush muhly
<i>Pleuraphis</i>	<i>mutica</i>	tobosagrass
<i>Sporobolus</i>	<i>airoides</i>	alkali sacaton
<i>Sporobolus</i>	<i>contractus</i>	spike dropseed
<i>Sporobolus</i>	<i>cryptandrus</i>	sand dropseed
<i>Sporobolus</i>	<i>flexuosus</i>	mesa dropseed
<i>Sporobolus</i>	<i>wrightii</i>	giant sacaton



Shrubs

- Important for arid lands restoration
- Shrub collections intended for future nursery production



Atriplex canescens



Fallugia paradoxa



Cercocarpus montanus

National and Regional

Forest Service Region 3

Bureau of Land Management

National Park Service

New Mexico Department of Transportation

US Fish and Wildlife Service

Natural Resources Conservation Service

CPNPP

Bamert Seed

Southwest Seed

Granite Seed

New Mexico

New Mexico Land Conservancy

Quivira Coalition

Native American communities

Native Plant Society of New Mexico

New Mexico Game and Fish

Rio Grande Community Farm

Curtis & Curtis Seed

Natural Heritage New Mexico

Partners



Arizona

Verde Valley Native Plant Materials Partnership (AZ)

Borderlands Restoration (AZ)

2017-18 Production Species (5)



*Asclepias
subverticillata*



*Bouteloua
curtipendula*



*Thermopsis
montana*



Bouteloua gracilis



Cleome serrulata

Contract

Ex. Rio Grande
Community
Farm

Speculation

Ex. Bamert
Seed
Commercial

Contract

NMSU Mora
Research Center
Research

Speculation

Ex. Curtis &
Curtis
Commercial

Contract

Tribe

Ex. Pueblos of
Santa Ana
& Tesuque

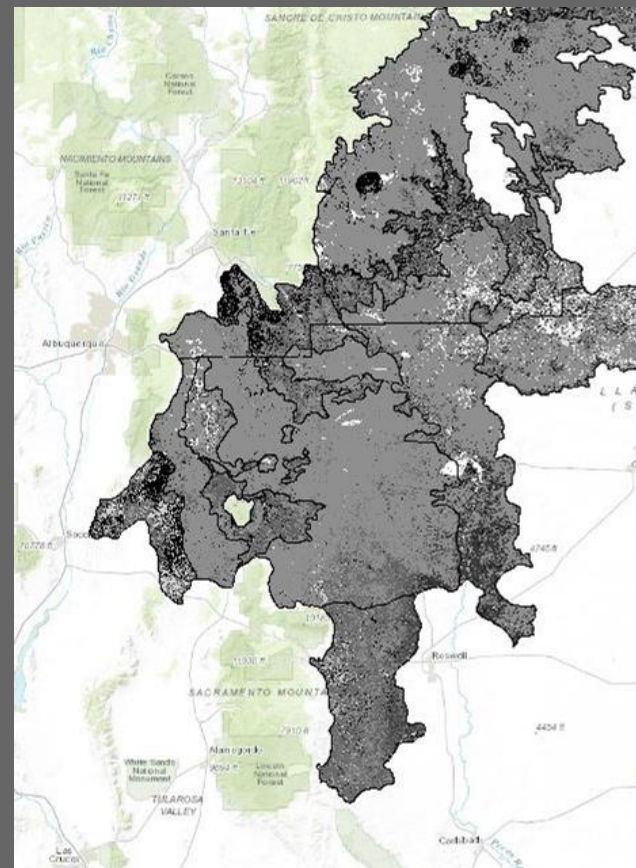
Ecoregional Seed Menus In Progress

- Used ArcMap to spatially group SW-ReGap vegetation data
- Process produced ecoregional plant community lists
- These lists will be populated by NHNM plot-level data

Product: Species lists linked to plant communities for each ecoregion

Goal For Restoration Practitioners: improve access to seed information

Goal For Producers: clarify which native species are most needed for restoration



Next Steps

- ❖ Coordinate with the BLM Seed Warehouse
- ❖ Expand collection & production
- ❖ Improve needs projections
- ❖ Facilitate new growers
- ❖ Research (Cultivation, Seed Zones, Restoration)
- ❖ Shared database and shared production



Let's identify gaps & work together to fill those gaps by
pooling resources, skills, and experience

Southwest Seed Partnership AZ Stakeholder Meeting:
April 2018



Questions?



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Partnership

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